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Letter No. 10
May 24, 1943

Dear Doctor:

This letter is sent to you by the Surgeon Generals of the Army, Navy and the U. S. Public Health Service, with the cooperation of the American Medical Association and under the auspices of the Committee on Information of the Division of Medical Sciences of the National Research Council.

Under the title "A Common Masquerading Lung Disease," Dr. Richard H. Overholt has called attention to the importance of early diagnosis of primary cancer of the lung. He points out that many patients ask for help at a time when the lesion is still confined to the lung, that the earliest lesions will in almost every instance give some telltale or suspicious shadow on a single x-ray film, and that there are two methods available for settling the diagnosis: first, the majority of lesions are visible bronchoscopically and are accessible for biopsy, and, second, when the diagnosis cannot be verified bronchoscopically, it is possible to explore the chest safely, settle the diagnosis and carry out curative treatment if necessary. (Overholt, Richard H.: "A Common Masquerading Lung Disease," Diseases of the Chest 9:197 (May-June) 1943.)

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In an editorial published in Diseases of the Chest, official publication of the American College of Chest Physicians, Dr. Charles W. Hendricks of El Paso, Texas, says that at best the 4x5 film now in use for studying the chest should be considered only as a screen test. He emphasizes a report by Erlich, Shiller and Edwards, who said, "Following a complete study of rejected cases by the New York City Health Department, it was found that the percentage reclassified as acceptable for army service after previous rejection, on the basis of 14x17 (paper) film was half that of those disqualified by the 4x5 film." The medical division of Selective Service headquarters in Tennessee states that a special board found negative 5,286 or 64.9 per cent of 8,159 films of selectees rejected for tuberculosis. Dr. Hendricks says that the results of these studies should encourage all induction examining station commanders to insist on the appointment of medical advisory boards. (Editorial, Diseases of the Chest 9:261 (May-June) 1943.)

A report by Brig. Gen. Charles C. Hillman indicates that the Army admission rates per thousand for tuberculosis in 1917 and 1918 were 11.7 and 9.2 respectively. The present rate is 8.7. Admissions in the Army during recent months have come largely from those on whom it was impossible to get chest roentgenograms upon induction. Men whose tuberculosis is service-connected are transferred to the Veterans Administration for

F-17

Further care. Those who are found to have tuberculosis not incident to the service are transferred to Fitzsimons General Hospital. To provide facilities in the East to supplement those of Fitzsimons General Hospital in the West, a new general hospital is under construction at Asheville, North Carolina. ("The Tuberculosis Problem in the Army," Diseases of the Chest 3:265 (May-June) 1947.)

The diet of the peasant farming population of North China and Manchuria, says Dr. H. S. D. Garven, is based on the fact that North China is a sorghum or tall millet growing area. Rice and noodles are little used. Dairy products, baked bread, white potatoes and beef are conspicuous by their absence. The millet, roughly ground or in whole grains, boiled to the consistency of porridge, is the staple. This is supplemented with green vegetables, fresh or pickled--mainly Chinese cabbage--a few root vegetables, some sweet potatoes, soy bean products, with occasionally a little pork, a little wheat flour and eggs. (Garven: H. S. D.: "Chinese Diets," Bull. Vancouver Med. Assn. 19:210 (April) 1945.)

Traction injuries to peripheral nerves are described by Drs. W. Bremner Hight and V. Holmes, writing from the Haffield Department of Orthopaedic Surgery (Peripheral Nerve Injury Centre) of Oxford University in England. Their report in The British Journal of Surgery, January, 1948, page 212, describes in detail eight cases of traction injury to the lateral popliteal nerve which were treated surgically and the lesions examined histologically. The traction lesion is characterized by much more extensive damage to the nerve-trunk than is found after injury by incision, laceration or gunshot wound. Spontaneous recovery did not take place even in cases in which nervous tissue was continuous throughout the lesion. In three cases end-to-end suture was performed after an extensive resection of the lesion; closure of the gap was obtained by extensive mobilization of the nerve and flexion of the knee. Recovery did not take place in these cases. It is concluded that failure of recovery after extensive resection and suture may be due to injury inflicted on the nerve during postoperative extension of the joint.

In a critical review entitled "Slow Union of Fractures," involving a study of 804 fractures of the shafts of the tibia and femur, M. Watson-Jones, Consultant in Orthopaedic Surgery, Royal Air Force, and Wing-Commander W. D. Coltart conclude that uncomplicated fractures treated by simple manipulation and plaster are uniting as quickly today as in former years. Ten to twelve weeks should be accepted as the minimal period of immobilization of lower-limb shaft fractures; lengthy protection is not only more safe but accelerates functional recovery. They state that only the minimal period of immobilization can be fixed; the "average period" is meaningless because there is such wide variation

between uncomplicated fractures which unite in about 12 weeks, difficult fractures in 12 to 24 weeks, infected and distracted fractures in 6 to 12 months, and avascular fractures in 1 to 3 years. Delayed union results from interrupted immobilization, traction and distraction, infection, persistent angulation, too early weight-bearing and loss of blood supply to the fragments. They say that every fracture unites if it is immobilized long enough. The greater use of skeletal traction accounts for recent increase in the frequency of slow union, particularly in fractures of the shaft of the tibia. The time required for union is trebled, or more than trebled, by distraction, even if it amounts only to 1/4 in. and even if it is corrected within a few days. Traction without obvious distraction also causes marked delay in fractures of the tibia. In skilled hands operative reduction does not cause delay, and it is better to prevent redisplacement of unstable fractures of the tibia by internal fixation than by continuous traction. The decision to use internal fixation should be made within a day or two of injury; it should not be a last resort. Early weight-bearing in plaster, in skeletal transfixion apparatus, or in a callioer splint, does not accelerate union; it delays it. The delay is most striking if angulation of the fragments is imperfectly corrected, because weight-bearing then causes distraction on one side of the fracture. Weight-bearing before the stage of clinical union is unwise. Reduction of fractures of the shaft of the femur should be secured immediately by manipulation and not gradually by heavy traction; light continuous traction should then be used only to maintain length and not also to control alinement. Infection of fractures and of neighboring soft tissues causes serious delay and should be minimized by early wound excision, early sequestrectomy and early replacement of destroyed skin by grafting. Infection of a fracture should not be a cause of non-union. (Watson-Jones, R. and Coltart, W. D.: "Slow Union of Fractures," British J. of Surgery 30:260 (January) 1943.

A report, assembled by the British Ministry of Health and published by Mrs. Paul M. Dodson and Daniel Westerman of the American Red Cross Harvard Field Hospital Unit in the British Medical Journal (April 24, 1943, p. 227), analyzes 2,575 cases of cerebrospinal fever treated with sulfonamides. All but 13 patients received sulfonamides; 365 also received some form of specific serum therapy. The fatality rate for all patients was 15.94% - greatest at the extremes of life and least in the 15-19-year age group. Of the deaths 84 per cent occurred within 24 hours of the time of admission to the hospital. Most frequent complications were cranial nerve paralysis, arthritis and deafness. The case fatality rate in which sulfonamides alone were used was 14.3%. In cases in which serum treatment was combined with chemotherapy the fatality rate was 13.8%. The authors conclude that "there is no indication that the administration of serum as an adjunct to sulfonamide therapy is beneficial."

The Bulletin of the Health Organization of the League of Nations (Vol. 10, No. 1, 1940) is devoted largely to an article by Dr. Yves Piraud, entitled, "The Present Status of Typhus Fever in Europe and the Means of Combating It." It presents the conditions for an epidemic, a summary of the present situation in Europe, a consideration of the possible extension of typhus, and some observations on the use of vaccines. The violent epidemic which prevailed in Spain in 1914 and 1915 was associated with destitution engendered by the Civil War. The appearance of typhus in France is related to the typhus which is hyperendemic in North Africa. There has been local infestation among troops from Central Europe in the area of Poland and in the invaded Soviet territories. Typhus is markedly on the increase in the endemic countries of Eastern Europe, Spain and North Africa, and has made its appearance in regions of Central and Western Europe hitherto free from the disease. Relieving should be carried out among those elements of the population which are most exposed. Vaccination should in the first instance be applied to medical and sanitary personnel, using a killed vaccine. If an epidemic becomes widespread and the population is a shifting one and is lowly, live vaccines should be used, according to Piraud, because of the rapid preventive action of such a vaccine following a single injection. Certain and absolute protection of all individuals vaccinated must not be expected. "Killed vaccines," says Piraud, "do, indeed, give to all a certain amount of protection, but this protection, which generally reduces the severity of typhus infection, is not always sufficient to prevent infection. As for live vaccines, the protection they confer is, as a rule, greater, but, unfortunately, it seems to be less constant. It is reported that two types of live vaccines were used in North Africa with equally favorable results: the new method of Glenc (killed flea virus) and that of Lajoyet-Sureau (mouse-brain). The article is complete with an extended bibliography.

Col. R. G. Leach of the R.C.S.D.C. reports on the use of anaesthesia in handling the Siege pain casualties in August 1941. His report appears in the Proceedings of the Royal Society of Medicine for March 1942, p. 207. From handling these casualties they say that intravenous pentothal-sodium can, and likely will, take care of upwards of 10% of anaesthetic demands. In the hands of experienced specialists, cyclopropane (often administered with trichloroethylene) is the anaesthetic of first choice for surgery of the head, neck, chest and abdomen; whenever profound muscular relaxation is needed; and when dealing with patients who are in shock. It still remains the safest agent in relatively unskilled hands. The Oxford vaporizer may prove valuable for the maintenance of anaesthesia by temporary, inexperienced anaesthetists. The Official Department of Anaesthetics of the University of Oxford has issued a pamphlet describing the use of the Oxford vaporizer. Nitrous oxide is no longer a popular agent with Canadian army anaesthetists. It is recommended that medical officers in each unit be trained in the use of ether and of intravenous pentothal-sodium so that administrations of anaesthesia will not be assigned to anyone who is not a graduate of medicine. (Freda B. Farrister, M.D., "The Oxford Vaporizer in Routine Hospital Practice," Proceedings of the Royal Society of Medicine, March 1942, p. 205).
